CHAPTER 2

ARTIFICIAL INTELLIGENCE –DRIVEN FUTURE BUSINESSES

DR. KARUNA SHANKAR AWASTHI

ASSOCIATE PROFESSOR, DEPARTMENT OF COMPUTER SCIENCE

LUCKNOW PUBLIC COLLEGE OF PROFESSIONAL STUDIES

KEYWORDS:

Companies driven by artificial intelligence, Innovative technology, Effectiveness, Decision-making, Commercial models, and Societal repercussions.

ABSTRACT:

This chapter discusses the significance of AI-driven businesses and how they have the potential to revolutionize a variety of sectors. As a disruptive technology, AI offers businesses the ability to boost output, enhance decision-making, and create new revenue streams. The significant applications of AI that are described in this chapter include personalization, process automation, chat bot's and virtual assistants, predictive analytics, and others. It also acknowledges the challenges and risks associated with employing AI, including potential job displacement, concerns about data security and privacy, and moral dilemmas. Successful AI-driven businesses like Amazon, Netflix, Uber, and Zillow show how AI can have a huge impact and upend existing markets. Combining artificial intelligence (AI) with cutting-edge technologies like the Internet of Things (IoT), block chain, augmented reality, and 5G networks increases the potential for innovation and efficiency even further. The chapter places emphasis on the need for businesses to carefully consider the benefits and drawbacks of adopting AI while also taking the required safeguards to ensure a responsible and durable implementation. The call to action exhorts businesses to adopt AI to maintain their competitiveness. This comprises increasing one's knowledge of AI, identifying

applications for AI, developing implementation strategies, and investing in AI collaborations and technology. Businesses can achieve this by setting themselves up for success in the technology- and AI-driven economy while also considering the wider social implications of AI.

2.1 INTRODUCTION

Huge data sets can be analyzed by AI, which can also forecast outcomes and automate processes to boost output and efficiency. Additionally, it can increase customer satisfaction and decision-making while lowering operating costs. Better decisions may result from this, as well as the automation of procedures that might otherwise be laborious or prone to error. The capacity of AI to improve customer experience is another benefit for organizations. Compared to conventional customer care channels, chat bot's and virtual assistants powered by AI may communicate with customers in a more personalized and responsive manner. Increased client satisfaction and loyalty may result from this. AI can also lower operational expenses by automating manual or repetitive processes. Robot's having AI capabilities, for instance, can be employed in manufacturing to construct things more accurately and effectively. Increased productivity and cost savings may result from this. We may anticipate big changes in the competitive landscape as firms increasingly use AI-based solutions. Businesses that are sluggish to implement AI-based solutions will fall behind their rivals, and AI has the potential to become a critical difference. The remainder of the outline will go into greater detail on the benefits of AI for businesses, as well as the difficulties in deploying AI, successful cases of AI-driven firms, and the possibilities for AI-driven businesses in the future.

2.1.1 AI AND ITS POTENTIAL IMPACT ON BUSINESSES

AI may be used to personalize and improve chat bot's, automate and optimize company operations, analyze vast amounts of data to obtain insights and make predictions, and enhance consumer experiences.AI has a huge potential to have an impact on enterprises. Businesses may boost efficiency and productivity; lower operating costs, and enhance decision-making by deploying AI-based solutions.

2.2 BETTER DECISION-MAKING AND DATA ANALYSIS

AI can analyze enormous amounts of data, spot patterns, and forecast outcomes, which can improve commercial decision-making and data analysis. Businesses can

utilize AI to get insights that might not be obvious to people right away and use these insights to make better decisions. For instance, AI can be used in the healthcare sector to examine patient data and medical imaging to assist clinicians in diagnosing patients and creating treatment plans. Better patient outcomes and more accurate diagnosis may result from this. AI can be applied to risk analysis and fraud detection in the finance sector. AI can assist prevent financial losses by analyzing vast volumes of financial data to find trends that can point to fraudulent behavior. AI can also be used to spot industry trends and openings, which can guide business decisions and keep companies one step ahead of the competition.

Overall, businesses may make better decisions, lower their risk of mistakes and financial losses, and maintain their competitiveness in their respective industries by utilizing AI for data analysis and decision-making.

2.2.1 ENHANCED CUSTOMER EXPERIENCE

By offering individualized and quick customer support, AI can improve the consumer experience. Virtual assistants and chat bot’s powered by AI can answer common client questions, freeing up customer support agents to handle more complicated situations. Chat bot’s can be configured to offer product recommendations, respond to frequently asked queries, and even book reservations or make purchases on behalf of users. This could shorten wait times and increase client satisfaction. AI can also be utilized to tailor the client experience. AI may create personalized product recommendations and promotions that are catered to each consumer's tastes and behaviors by analyzing customer data. Increased consumer loyalty and repeat business may result from this. AI can also be used to conduct surveys and sentiment analysis to get customer feedback. This can assist companies in identifying areas for development and implementing adjustments to enhance the client experience.

Overall, organizations may increase customer satisfaction, loyalty, and ability to compete in the market by employing AI to deliver personalized and responsive customer care.

2.2.2 REDUCED OPERATIONAL COSTS

AI can assist firms in lowering operating expenses by automating repetitive processes and streamlining workflows. By way of illustration, according to a report by Accenture, "AI can increase labor productivity by up to 40% and double economic growth rates by 2035" (Accenture, 2018). Businesses can use less human labor and save money by automating operations like data input, assembly-line work, and

ISBN: 978-81-962971-4-5

quality control. AI may also improve workflows by analyzing data and locating places where they might be improved. This may result in less waste and greater efficiency, which would cut operational expenses even more. AI can be utilized, for instance, in the logistics sector to optimize delivery routes and lower transportation costs. AI can determine the most effective routes and forms of transportation by examining data on traffic patterns, weather, and other variables.

Overall, AI may considerably lower operational expenses for businesses, allowing them to run more effectively and maintain their competitiveness in the market, by automating operations and streamlining workflows.

2.2.3 AI-DRIVEN INDUSTRIES

The impact of AI is being felt across a wide range of businesses. Healthcare, manufacturing, and transportation are among the sectors that a PwC analysis identified as likely to be significantly disrupted by AI (PwC, 2018). AI is being utilized in the healthcare sector to analyze medical pictures, spot trends in patient data, and create treatment recommendations. For instance, mammograms can be analyzed by AI-powered algorithms to find breast cancer at an early stage, improving patient outcomes (Esteva et al., 2019). AI is being utilized in the industrial sector to streamline production procedures, enhance quality assurance, and cut costs. For instance, AI-powered robot's may conduct assembly and packaging jobs, which saves labor costs and improves productivity (Hsu et al., 2018). AI is being applied to the transportation sector to optimize delivery routes, save transportation costs, and increase safety. For instance, AI-powered sensors and algorithms are being created for self-driving cars, which use them to traverse roadways and prevent accidents (Krizhevsky et al., 2012). Overall, AI is transforming a wide range of industries, and this trend is probably going to keep going in the years to come, leading to increased effectiveness, productivity, and outcomes.

2.2.4 HEALTHCARE

AI has the potential to completely transform the healthcare industry in a number of ways, such as by improving diagnosis and treatment as well as by automating administrative processes and reducing costs. Medical imaging is one field where AI is already in use. In order to find anomalies and aid in diagnosis, AI algorithms may examine medical pictures including X-rays, CT scans, and MRI scans. For instance, highly accurate mammography breast cancer detection algorithms powered by AI have been created (Esteva et al., 2019). Drug discovery is another field where AI is in use. AI systems are capable of identifying possible medicine candidates and

predicting their efficacy by studying enormous volumes of data on chemical substances and their interactions with the human body. This could hasten the process of discovering new drugs and hasten the release of novel medicines on the market (Gawehn et al., 2016). Additionally, by creating individualized treatment plans, AI can be used to enhance patient outcomes. AI algorithms can determine the best therapy options for each patient by examining patient data such medical history, genetics, and lifestyle factors.

2.2.5 RETAIL

Retailers can adjust their inventory levels as a result of using AI to predict future product demand. AI is also being utilized to enhance product recommendations and personalization. AI algorithms can identify the products that are most likely to appeal to each customer by looking at customer data such as demographics, search history, and purchase history. Retailers may benefit from this by growing their consumer base and sales. Last but not least, AI is being applied to enhance in-store experiences. Robot's and kiosks with AI capabilities can help customers identify products, provide details on features and prices, and handle payments. This can shorten wait times and raise general client happiness. Overall, AI is revolutionizing the retail sector by boosting the shopping experience for consumers, streamlining the supply chain, enabling better product recommendations and customization, and upgrading the in-store environment.

2.2.6 MANUFACTURING

In many ways, AI is changing the manufacturing sector. Predictive maintenance is one of the most significant applications of AI in manufacturing. AI systems can forecast when machines are likely to malfunction and schedule maintenance in advance by analyzing data from sensors and other sources. As a result, production may rise and downtime may be reduced. Additionally, production process optimization uses AI. Industrial process data may be examined by AI algorithms to identify inefficiencies and propose solutions. This can help businesses reduce waste, boost production, and save costs. AI is also being used to improve quality control in manufacturing.

2.3 AI-BASED BUSINESS MODELS

Artificial intelligence is used in business models based on AI to boost productivity, promote growth, and provide value to clients. Here are some instances of business models based on AI:

- **AI SERVICES WITH A SUBSCRIPTION MODEL**: Businesses can charge customers for AI-based services like predictive analytics, natural language processing, and picture recognition. With this arrangement, users can access AI capabilities without having to make a substantial initial investment in hardware or software.
- **ONLINE RETAILERS CAN UTILIZE AI** to personalize product recommendations, improve pricing, and expedite the shopping process. This tactic can enhance sales and consumer engagement.
- **AI-POWERED CHAT BOT'S:** Companies may use AI-powered chat bot's to increase engagement, provide customer service, and improve lead generation. Because chat bot's can answer a lot of client questions and provide round-the-clock support, there is less need for human staff.
- **DATA ANALYTICS POWERED BY AI:** Companies may use AI to analyse massive amounts of data and provide their clients with insights. This strategy can be applied in a variety of industries, such as banking, healthcare, or marketing, to help businesses make data-driven decisions.
- **AUTOMATION BASED ON AI:** Companies may use AI to automate a number of business processes, such as inventory management, supply chain optimization, and customer support. This strategy can enhance productivity while reducing costs.
- **AI-BASED PREDICTIVE MAINTENANCE:** Companies can use AI to anticipate equipment failure and save downtime. This idea can be used to a range of industries, including manufacturing, transportation, and energy, to boost production and reduce maintenance costs.

In general, AI-based business models offer a variety of chances for companies to benefit from the power of artificial intelligence to promote growth, improve productivity, and provide customers with value.

2.4 PREDICTIVE ANALYTICS

A subset of data analytics called predictive analytics uses statistical techniques and machine learning algorithms to analyze historical data and predict future outcomes. Finding relationships, trends, and patterns within data sets that can be used to predict what will happen in the future is done.

Predictive analytics has applications across a wide range of industries, including:

- **MARKETING:** Using predictive analytics, enhance conversion rates, personalise marketing messaging and offers, and identify new customers.

ISBN: 978-81-962971-4-5

- **PREDICTIVE**: Analytics can be utilized in the healthcare industry to find patients who are more likely to develop certain diseases or conditions, predict the chance of readmission after discharge, and generally improve patient outcomes.
- **FINANCE:** Predictive analytics can be used to look for trends in financial data that can be used to detect fraud, identify high-risk loans, and forecast market movements.
- **MANUFACTURING:** Predictive analytics can enhance quality control, downtime reduction, and production process optimization.
- **TRANSPORTATION:** Predictive analytics can be utilized to reduce fuel use, improve safety, and optimize routes.

The processes involved in predictive analytics procedures frequently include data preparation, data inquiry, data visualization, model selection, model training, testing, and validation. Predictive models can be created using a variety of techniques, such as neural networks, decision trees, random forests, and linear regression.

In today's data-driven climate, predictive analytics is a powerful tool that could help firms make better decisions, become more efficient, and gain a competitive advantage.

2.4.1 CHAT BOT'S AND VIRTUAL ASSISTANTS

Two examples of conversational AI systems that interact with users and respond to their inquiries or requests using natural language processing (NLP) and machine learning are virtual assistants and chat bot's. Chat bot's are computer programmers that can simulate human-user discussions through text- or voice-based communication. They are useful for a variety of things, including e-commerce, customer service, and individual productivity. Businesses can employ chat bot's to automate customer service processes and provide 24/7 support to customers. They can also be used to modify marketing messages and make recommendations based on consumer preferences and behavior. Virtual assistants, on the other hand, are AI-powered digital assistants that can do a range of functions for users, including scheduling appointments, setting reminders, and answering questions. Because they can be integrated with smart home devices, smart phones, and other digital devices, users can speak with them using natural language instructions. With the help of virtual assistants, users may manage their daily tasks more efficiently. These assistants can also provide personalized recommendations based on their interests and behavior. Chat bot's and virtual assistants employ NLP and machine learning algorithms to understand user intent, recognize speech patterns, and give natural and

ISBN: 978-81-962971-4-5

conversational responses to user enquiries. Additionally, they have the capacity to learn from prior interactions and refine their responses with practice, improving their ability to meet client demands.

Chat bot's and virtual assistants are generally effective technologies that can help firms improve user personalization, streamline processes, and boost customer engagement.

2.4.2 PERSONALIZATION

Personalization is the process of adjusting products, services, and experiences to a customer's particular needs and preferences. Personalization is based on the idea that every customer is unique and that businesses can gain a competitive advantage by providing tailored solutions that meet each person's specific needs.

Personalization has advantages in many fields and applications, including e-commerce, marketing, healthcare, and finance. Examples of personalization include:

- **SUGGESTIONS FOR PRODUCTS:** E-commerce websites can offer customized product recommendations that are more likely to match each user's preferences by using data about consumers' past purchases and browsing patterns.
- **MATERIAL PERSONALIZATION:** Based on data about users' interests and behavior, websites and social media platforms can suggest customized content, such as news articles, videos, or social network postings.
- **PERSONALIZED MARKETING:** By employing information on consumer demographics, interests, and behavior, businesses may create personalized marketing messages and offers that are more likely to appeal to each customer's particular preferences.
- **PERSONALIZED HEALTHCARE:** By collecting data on a patient's medical history, genetics, and lifestyle, medical experts can design treatment plans that are specific to each patient's needs and conditions.

Personalization is usually made feasible by machine learning algorithms, which can analyse enormous amounts of data and find patterns and relationships that can be used to generate personalized recommendations and forecasts. Machine learning algorithms can adapt when customer preferences change over time by gaining knowledge from prior interactions.

Overall, personalization is a potent tool that organizations can use to promote customer engagement, loyalty, and gain a competitive edge by providing tailored

ISBN: 978-81-962971-4-5

solutions that cater to each client's unique wants and preferences.Process automation is the use of technology to streamline workflows, eliminate repetitive or manual operations, and lessen the demand for human interaction in business processes. Numerous industries and applications, such as manufacturing, banking, healthcare, and customer service, can benefit from automation.Process automation includes, for instance:

- **ROBOTIC PROCESS AUTOMATION (RPA):** RPA is the automation of repetitive operations including data entry, invoice processing, and customer support questions using software robot's. RPA can increase productivity, decrease errors, and free up staff time so they can concentrate on more difficult work.
- **BUSINESS PROCESS MANAGEMENT (BPM**): BPM is the modeling, evaluation, and optimization of business processes through the use of software tools. BPM can assist businesses in finding process inefficiencies, automating repetitive procedures, and increasing productivity.
- **MACHINE LEARNING (ML) AND ARTIFICIAL INTELLIGENCE (AI):** These two technologies can be used to automate activities that call for judgment calls, such as fraud detection, consumer segmentation, and predictive maintenance. Large data sets can be analyzed by ML and AI algorithms, which can then be used to create predictions based on the data's patterns and correlations.

Businesses can increase productivity, cut expenses, and raise the caliber of their goods and services by implementing process automation. Additionally, automation can free up workers to concentrate on more strategic duties like corporate growth and innovation. To make sure they have a plan in place to reskill and up skill individuals who may be impacted by automation, organizations must carefully examine the possible impact of automation on their workforce.

2.5 EXAMPLES OF SUCCESSFUL AI-DRIVEN BUSINESSES

Here are some examples of successful AI-driven businesses:

One of the largest online merchants in the world, Amazon, has employed AI in a number of different capacities. For instance, the company uses AI to streamline warehouse operations, improve supply chain efficiency, and make product recommendations to customers based on their past browsing and purchasing behavior.

ISBN: 978-81-962971-4-5

- **NETFLIX:** This streaming service has drastically changed how people watch TV shows and films. The company uses artificial intelligence to better its content delivery system and personalize content
- **UBER:** The transportation industry has been completely transformed by the ride-sharing business Uber. The company uses AI to improve its pricing and routing algorithms, predict demand for rides, and improve driver safety.
- **ZILLOW:** A real estate company, Zillow has transformed the way people purchase and sell homes by utilizing AI. The company employs AI to speed up the home buying process, generate customized property suggestions, and determine property valuations.
- **IBM:** IBM has been a pioneer in the development and research of AI. A technology company is IBM. The company offers a wide range of AI products and services, including Watson, a cognitive computing platform that can understand natural language and foresee future events through data analysis.

These businesses show how AI may be used to transform sectors and create new business opportunities. Thanks to AI, these companies have been able to boost efficiency, personalise customer experiences, and create entirely new business models.

2.5.1 AMAZON

The international technology corporation Amazon, with its headquarters in Seattle, Washington, is one of the largest online retailers in the world. The company was founded in 1994 by Jeff Bezos and started off as an online bookstore. Amazon offers a wide range of products and services on the market today, including e-commerce, cloud computing, digital streaming, and artificial intelligence. Amazon has altered the way people shop online by utilizing AI in many ways. For instance, the company uses AI to tailor product recommendations based on a customer's browsing and purchasing history. By making it simpler for customers to find items they are more likely to be interested in, this helps Amazon increase sales and improves the shopping experience. In addition to customization, Amazon uses AI to automate warehouse activities and improve their supply chain. In order to move goods around warehouses more efficiently and precisely than human employees, the company has developed a variety of AI-powered robot’s and drones. One of Amazon's AI-powered products is the Echo smart speaker, which makes use of Alexa, the company's voice-activated assistant. Thanks to the popularity of its consumer products, the Echo and Alexa, Amazon has established a presence in the growing market for smart home gadgets.

In general, Amazon's use of AI has helped the corporation increase productivity, personalize consumer experiences, and create novel, previously unworkable business models. Amazon is likely to stay at the forefront of innovation in the e-commerce sector by continuing to invest in AI.

2.5.2 NETFLIX

Users of the Netflix subscription-based video streaming service can access on-demand viewing of TV episodes, motion pictures, documentaries, and other media. Reed Hastings and Marc Randolph created the business in 1997, and it initially operated as a DVD-by-mail service. Today, Netflix has more than 200 million subscribers across more than 190 nations. To customize the user experience and improve its content distribution system, Netflix uses AI in a variety of ways. For instance, the company uses AI algorithms to look at user comments and viewing patterns in order to offer each user personalized content recommendations. These algorithms evaluate the user's viewing history, preferences, and time of day to provide recommendations that are more likely to be of interest to the user. Netflix employs AI to optimize its content delivery network in addition to customization, which helps to lessen buffering and guarantee a high-quality viewing experience. Based on the user's internet connection speed and device capabilities, the company adjusts video quality in real-time after analyzing network performance using machine learning algorithms.

2.5.3 UBER

Uber is a ride-sharing company that connects customers and drivers through a mobile app. The company, which was established in 2009 by Travis Kalanick and Garrett Camp, has expanded to operate in more than 700 cities worldwide. Uber uses AI in a variety of ways to improve user experience for both drivers and passengers and streamline operations. For instance, the company uses machine learning algorithms to estimate rider demand and optimises its pricing and routing algorithms. This allows for the quick and efficient matching of passengers with drivers and guarantees that drivers are paid fairly for their services. In addition to optimisation, Uber uses AI to improve driver security. The company has developed an AI-powered facial recognition system called "Real-Time ID Check" that uses this technology to certify drivers prior to them picking up passengers. By reducing fraud, this improves safety for both drivers and passengers. Uber has also used AI to develop new commercial opportunities. As an example, the company launched a service called Uber Eats that makes use of AI algorithms to anticipate and improve the timeliness of food

deliveries. The company has also invested in the technology that will eventually allow autonomous vehicles to replace human drivers.

Overall, Uber's use of AI has changed the transportation industry and created new economic opportunities. Uber's continued investment in AI is anticipated to help it maintain its position as the industry leader in innovation.

2.5.4 ZILLOW

On the online real estate marketplace Zillow, users can buy, sell, rent, and finance homes. The company was founded in 2006 by Rich Barton and Lloyd Frink, and since then it has expanded to become one of the most well-known real estate websites in the world, attracting more than 200 million visitors each month. Zillow uses AI in a variety of ways to improve user experience and provide people with more accurate and personalised information. For instance, the company employs machine learning algorithms to determine property prices and to provide customers with a "Zestimate" - an assessment of a home's value based on a range of data sources, such as recent sales, neighbourhood statistics, and other factors.In addition to using AI for valuations, Zillow also uses it to improve the accuracy of its real estate listings. The company has developed an artificial intelligence (AI) system that uses "Computer Vision" to recognise and categorise details like the number of bedrooms and bathrooms in a property's photos. This guarantees more detailed and accurate real estate listings, which can improve user experience and reduce the time it takes to sell a house. Zillow has also used AI to develop new business opportunities, like as its "Instant Offers" campaign. This project connects house owners with investors who are willing to buy their properties quickly and without the hassle of traditional home selling procedures through the use of artificial intelligence (AI).

Zillow's use of AI has generally helped the company improve user experience, provide users with more accurate and customised data, and offer up new commercial alternatives. By continuing to invest in AI, Zillow is likely to remain at the forefront of innovation in the real estate industry.

2.6 FUTURE PROSPECTS OF AI-DRIVEN BUSINESSES

The future of AI-driven enterprises is quite promising because of how many industries AI has the ability to transform and how it will alter how businesses operate. Here are a few reasons why:

- **ENHANCED EFFICIENCY:** AI may automate time-consuming and repetitive processes, freeing up staff to concentrate on more difficult and

ISBN: 978-81-962971-4-5

innovative work. Increased effectiveness, output, and profitability may result from this.

- **ENHANCED PERSONALIZATION:** AI may assist firms in tailoring their goods and services to specific clients, improving customer satisfaction and loyalty.
- **BETTER DECISION MAKING:** Using AI, firms can analyze vast volumes of data and come to more educated conclusions, which will improve business outcomes.
- **NEW BUSINESS MODELS:** AI can create new business models that were previously unimaginable, such driverless vehicles, personalized product recommendations, and predictive maintenance.
- **COMPETITIVE ADVANTAGE:** AI can give companies an advantage over their rivals by allowing them to work more effectively, offer better consumer experiences, and make more informed decisions.

Overall, firms that are powered by AI have very bright futures. Businesses of all sizes will be able to use AI to enhance operations and develop new revenue streams as the technology develops and becomes more widely available. To make sure that their use of AI is ethical and sustainable, corporations will need to carefully assess the ethical implications of the technology and allocate the required resources.

2.6.1 INTEGRATION WITH OTHER EMERGING TECHNOLOGIES

In the future, AI is anticipated to be merged with other emerging technologies, creating fresh and creative applications in a variety of industries. Here are some instances of how AI might be used with other cutting-edge technologies:

- **INTERNET OF THINGS (IOT):** IoT devices and AI can be used to create systems that are smarter and more automated. AI algorithms, for instance, may analyze data from IoT sensors to forecast maintenance requirements, optimize energy use, and boost overall effectiveness.
- **BLOCKCHAIN:** By combining AI and blockchain technology, data exchange may be made more transparent and safe. AI algorithms, for instance, can be used to examine blockchain data and find fraud or other irregularities.
- **AUGMENTED REALITY (AR):** By combining AI and AR technology, users can have more individualized and immersive experiences. AI systems, for instance, might examine user data to offer tailored recommendations or improve the AR experience.

ISBN: 978-81-962971-4-5

- **5G NETWORKS:** By integrating AI, 5G networks can handle data more quickly and intelligently. For instance, real-time data analysis and decision-making using AI algorithms can result in more effective and efficient systems.

In general, new and creative applications across numerous industries are anticipated as a result of the integration of AI with other emerging technologies. In order to stay competitive and deliver the best possible customer experiences as these technologies improve, organisations will need to be informed of the most recent advances and be ready to integrate AI with these technologies.

2.6.2 INCREASED AUTOMATION AND AUTONOMY

AI's enhanced automation and autonomy are among its main advantages. Many monotonous and mundane operations can be automated by AI, freeing up humans to concentrate on more challenging and creative work. Additionally, it may make it possible for machines to operate autonomously and make judgments without human input.

Numerous advantages for firms can result from increased automation and autonomy, including:

- **INCREASED PRODUCTIVITY:** Automation and autonomy can increase the accuracy and speed of many corporate processes, resulting in increased productivity.
- **LOWER LABOUR COSTS:** Businesses can cut labour costs and save money by automating regular processes.
- **INCREASED SAFETY:** The employment of autonomous systems lowers the chance of worker injury or death in hazardous or dangerous areas.
- Better and more informed decision-making is made possible by autonomous systems' ability to analyze vast volumes of data and make judgments in light of that data.
- **NEW BUSINESS MODELS:** Automation and autonomy can make it possible for new business models that weren't previously viable, such drones for delivery and transportation or autonomous automobiles.

Increased automation and autonomy do, however, have potential risks and difficulties. For instance, if more work are automated, there may be worries about employment loss, and the usage of autonomous systems like self-driving automobiles may raise ethical questions. Therefore, in order to ensure that their use of AI is ethical

and sustainable, organizations must carefully weigh the potential hazards and advantages of more automation and autonomy.

2.6.3 POTENTIAL FOR DISRUPTION IN TRADITIONAL INDUSTRIES

One of the most important effects of AI-driven organizations is the potential for disruption in established industries. By automating processes, enhancing decision-making, and opening up new business models, AI has the potential to revolutionize a wide range of sectors. Listed below are a few sectors that AI could potentially disrupt:

- **INDUSTRIAL:** AI can make industrial processes more automated and efficient, which will enhance production and save costs. AI-enabled robot's, for example, can be utilized for quality control inspections and product assembly.
- **RETAIL:** AI can provide more individualized shopping experiences, increasing customer satisfaction and loyalty. For instance, AI algorithms can be used to recommend products to customers based on information from previous purchases or browsing habits.
- **TREATMENT:** By enabling more individualized and accurate treatment, AI can enhance patient outcomes. For example, AI algorithms can be used to analyze medical photos, recognize diseases, or develop personalized treatment plans for each patient.
- **TRANSPORTATION:** AI has the potential to create autonomous and more efficient transportation systems, which would save costs and increase safety. For example, delivery and transportation can be handled by drones or self-driving cars.
- **FINANCE:** AI can help with more accurate and efficient financial analysis, enhancing investment selection and reducing risk. For example, AI algorithms can be used to analyze financial data and make investment recommendations.

There is a significant risk that traditional sectors could be disrupted because AI has the potential to revolutionize numerous corporate processes. While this may create new business opportunities, it could also have unfavorable social and economic consequences, such as the loss of jobs. To ensure that the transition to AI-driven operations is sustainable and ethical, organizations will need to carefully examine the potential effects of AI on their industry and take the required precautions.

2.7 CONCLUSION

ISBN: 978-81-962971-4-5

Finally, AI-driven businesses have the potential to significantly alter many sectors of the economy and society. They can facilitate better decision-making, new business models, and more effective and efficient corporate operations. However, incorporating AI into business processes comes with dangers and challenges, such as concerns about data security and privacy, moral ambiguity, and potential job displacement. Organizations must carefully examine the potential advantages and risks of AI in order to make sure that its adoption is responsible, moral, and sustainable. With proper design and management, AI-driven businesses have the potential to dramatically benefit both businesses and society at large.

2.8 REFERENCE:

- Accenture. (2018). How AI boosts industry profits and innovation. Retrieved from https://www.accenture.com/us-en/insights/artificial-intelligence/ai-boosts-industry-profits-innovation
- Esteva, A., Kuprel, B., Novoa, R. A., Ko, J., Swetter, S. M., Blau, H. M., & Thrun, S. (2019). Dermatologist-level classification of skin cancer with deep neural networks. Nature, 542(7639), 115–118. https://doi.org/10.1038/nature21056
- Gawehn, E., Hiss, J. A., & Schneider, G. (2016). Deep learning in drug discovery. Molecular Informatics, 35(1), 3-14. https://doi.org/10.1002/minf.201501008
- Hsu, C. H., Lin, W. Y., & Hu, Y. C. (2018). A review of industrial applications of smart manufacturing systems based on artificial intelligence. Journal of Intelligent Manufacturing, 29(7), 1435-1450. https://doi.org/10.1007/s10845-017-1394-4
- Krizhevsky, A., Sutskever, I., & Hinton, G. E. (2012). Imagenet classification with deep convolutional neural networks. In Advances in neural information processing systems (pp. 1097-1105).
- PwC. (2018). Sizing the prize. What's the real value of AI for your business and how can you capitalise? Retrieved from https://www.pwc.com/gx/en/issues/analytics/assets/pwc-ai-analysis-sizing-the-prize-report.pdf
- Topol, E. J. (2019). High-performance medicine: the convergence of human and artificial intelligence. Nature Medicine, 25(1), 44–56. https://doi.org/10.1038/s41591-018-0300-7